



GARY R. HERBERT

Governor

SPENCER J. COX

Lieutenant Governor

State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER

Executive Director

Division of Oil, Gas and Mining

JOHN R. BAZA

Division Director

September 29, 2015

Robert Hicken
Mountain Valley Stone, Inc.
2276 South Daniels Road
Heber City, Utah 84032

Subject: Initial Review of Notice of Intention to Commence Large Mining Operations, Mountain Valley Stone, Inc., Brown's Canyon Quarry, M/043/0019, Summit County, Utah

Dear Mr. Hicken:

The Division of Oil, Gas and Mining has reviewed the referenced Notice of Intention to Commence Large Mining Operations (NOI) which was received August 31, 2015. The attached comments need to be addressed before tentative approval may be granted.

The comments are listed under the applicable Minerals Rule heading; please format your response in a similar fashion. Please address only those items requested in the attached technical review by sending replacement pages for the NOI using **redline and strikeout** text. After the NOI is determined technically complete, the Division will request two clean copies of the complete and corrected plan. Upon final approval, both copies will be stamped approved, and one will be returned to you.

Please submit your response to this review by November 9, 2015. The Division will not approve further increases to the disturbed area until this NOI is approved.

The Division will suspend further review until your response to this letter is received. Please contact Leslie Heppler at 801-538-5257 or me at 801-538-5261 if you have questions regarding the review. Thank you for your cooperation in completing this permitting action.

Sincerely,

Paul B. Baker

Minerals Program Manager

PBB: lah: eb

Attachment: Review

cc: Stephen Allen, BLM SL FO (SAllen@blm.gov)

Army Corps of Engineers

Leah Ann Lamb, Division of Water Quality

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1594 West North Temple, Suite 1210, Salt Lake City, UT 84116

PO Box 145801, Salt Lake City, UT 84114-5801

telephone (801) 538-5340 • facsimile (801) 359-3940 • TTY (801) 538-7458 • www.ogm.utah.gov



**Initial REVIEW OF NOTICE OF INTENTION
TO COMMENCE LARGE MINING OPERATIONS**

**Mountain Valley Stone
Browns Canyon Quarry**

**M/043/0019
September 29, 2015**

General Comments:

Comment #	Sheet/Page/Map/Table #	Comments	Initials	Review Action
1	General	The Notice should be formatted to easily incorporate additional revisions and amendments.	lah	
2	General	The Division may have additional comments based on the responses to this review. Please attempt to provide a complete, technically adequate submittal.	lah	
3	General	Throughout the NOI the operator has written the NOI as a snapshot in time; to limit the need to constantly update the NOI by the operator, it is the recommendation of the Division to have the operator write the NOI with a minimum of a five year of anticipated mining.	lah	
4	Pages 20 - 22	The operation practices section of the rules, R647-4-107, has been included as part of the NOI, but page 7 says there will be a complete operation plan. Please move all applicable parts of pages 20-22 to section 106. The text on pages 20-22 is well done, but needs to be in the proper place. Please move all the text in Section 107 (Operation Practices) to Section 106 (Operation Plan) and place text where it applies to the rules.	lah	
6	General	Please move all applicable the text in section 111 (Reclamation Practices) to 110 (Reclamation Plan) and place text where it applies to the rules.	lah	
7	Appendix B	This appendix refers back to the NOI for vegetation information which refers back to Appendix B for details. The vegetation data could not be located.	lk	
8	Appendix E	The Corps of Engineers preliminary determination has been provided, but the Division would like to know if an approved determination has been made yet.	mpb	
9	Appendix F	Section K SWPPP Certification is not signed and dated.	mpb	
10	Appendix I	Appendix I: The recommendations in the geotech report are a snapshot in time and need to be consistent with the text. Figure 7 has been modified and needs to be corrected.	lah	

R647-4-104 – Operator Information and Surface and Mineral Ownership

Comment #	Sheet/Page/Map/Table #	Comments	Initials	Review Action
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Comment #	Sheet/Page/Map/Table #	Comments	Initials	Review Action
11	Page 9 and Figure 2	SR3 Resources LLC is shown as an adjacent landowner and surface owner. Please correct either the text or figure for consistency	lah	
12	Omission – Page 9 & 10	Please show adjacent landowners to the south.	lah	
13	Page 9	BLM had mineral rights on a portion of the land shown on Figure 2; this is inconsistent with page 9. Please provide a separate map showing mineral rights ownership (versus the surface rights).	lah	
14	Page 10	Item 10. Why haven't the landowners been notified? Mining has already started.	lah	

R647-4-105 - Maps, Drawings & Photographs

105.1 - Topographic base map, boundaries, pre-act disturbance

Comment #	Sheet/Page/Map/Table #	Comments	Initials	Review Action
15	Figure 3a & 5	The scale is in English units, and the topographic lines are in metric. Please use consistent units. In addition please label major topographic lines.	lah	

105.2 - Surface facilities map

Comment #	Sheet/Page/Map/Table #	Comments	Initials	Review Action
16	Figure 4	Add the culverts to the Figure 4.	lah	

105.3 - Drawings or Cross Sections (slopes, roads, pads, etc.)

Comment #	Sheet/Page/Map/Table #	Comments	Initials	Review Action
17	Figure 5 and 5a	Final slope angles are needed for each slope, not just the new pit, which is consistent with text and Appendix I.	lah	
18	Figure 6	The existing grade shown on line C-C needs to be defined in the text to be consistent with Appendix I. If a variance is requested, that portion of the plan would require a variance.	lah	
19	Figure 6a & 6b	The cross sections are not consistent with Figure 5 or the text of the NOI. The proper annotation for slopes is 2H:1V. Please edit for consistency.	lah	

R647-4-106 - Operation Plan

106.3 - Estimated acreages disturbed, reclaimed, annually

Comment #	Sheet/Page/Map/Table #	Comments	Initials	Review Action
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Comment #	Sheet/Page/Map/Table #	Comments	Initials	Review Action
20	Page 14	Table 1 is labeled as "...and over the life of the mine" but the table only shows the current disturbance. Please change the title of Table 1. Please include a table with the reclaimed acres or state in the text that no reclamation has begun and estimate the year it is anticipated to begin.	lah	
21	Page 14	What is the volume of topsoil that was salvaged from existing operations? What is the acreage involved with these stockpiles? Please explain all the '0' affected acreages. Are these areas included in the existing disturbance? Explain the relationship between topsoil stockpiles and haul roads (item 5 on the table).	lk	

106.5 - Existing soil types, location, amount

Comment #	Sheet/Page/Map/Table #	Comments	Initials	Review Action
22	Pages 15-17	This section does not identify the volume of soils that have either been salvaged and stockpiled for reclamation, or the amount of soil that is available to salvage and stockpile. Please provide this information, and identify where each stockpile will be located, as well as the volume of soil to be in each stockpile.	lk	

106.6 - Plan for protecting & re-depositing soils

Comment #	Sheet/Page/Map/Table #	Comments	Initials	Review Action
23	Page 17 & 22	This section identifies a volume of soil that has been stockpiled from a 10-acre area, but it does not clarify all soil that has been stockpiled, nor does it identify the volume to be stockpiled in the future. Please provide. Also, slopes on soil stockpiles should not exceed 3h:1v and stockpiles should not exceed 10 feet in height. This also needs to be corrected on Page 22.	lk	

106.7 - Existing vegetation - species and amount

Comment #	Sheet/Page/Map/Table #	Comments	Initials	Review Action
24	Page 19	This page contains a statement that, "The mining plan proposes to avoid most of the wetlands and waters on site." Until such time as written concurrence has been received from the Corps of Engineers all possible and probable wetlands and waters need to be avoided. Please move the sentence to the end of the paragraph and write with specifics areas that will be avoided. Please refer to a map.	lah	
25	Page 19	With three distinct vegetation communities, the vegetation data should describe each community, especially the wetland community. For an area dominated by sagebrush, it is unusual to only have four percent cover from sagebrush. Photos of the site show more sagebrush than this. Please provide accurate vegetation data for each community type (sagebrush, dryland meadow, and wetland meadow). Provide a list of plant species for each community as well as the percent ground cover (aerial extent of vegetation cover) found in each community.	lk	

106.8 - Depth to groundwater, extent of overburden, geology

Comment #	Sheet/Page/Map/Table #	Comments	Initials	Review Action
26		The text states that a well was drilled on the property. Please reference on which maps this well and the water right associated with it are located.	aa	
27		The operator mentions seasonal waterways in this section. What are the seasonal waterways? Lost Creek? Please provide clarification by describing the water bodies in the region. Address any perennial streams, ephemeral streams, any springs and seeps in the permit area and the surrounding vicinity.	aa	
28		There is an additional water well mapped on the permit area owned by Dee Henshaw, E1799. Please verify if the location of this water right is accurate. There was no discussion of this water right in the text. A well log was not found the Division of Water Rights website. If there is any information on this well and the depth to groundwater, please provide it.	aa	
29		There is a third water right mapped in the permit area that appears to be a surface water right under the name of Thomas American Stone. The water right appears to once have been located on a named spring upon which the quarry has since encroached. If any groundwater seepage is occurring from this source, please discuss how the water is managed in the mine pit.	aa	
30	Page 20 para 2	Refer to Figure 9.	lah	

106.9 - Location & size of ore, waste, tailings, ponds

Comment #	Sheet/Page/Map/Table #	Comments	Initials	Review Action
31	Page 20, Section 106.9	This paragraph refers to Figures 5 and 1. Neither applies to the paragraph. Figure 4 could be modified, if additional labels are added to the figure.	lah	
32	Omission	Please address in the text if there are any tailings, treatment ponds, or discharges.	lah	

106.10 - Amounts of material moved (including ore, waste, topsoil, etc.)

Comment #	Sheet/Page/Map/Table #	Comments	Initials	Review Action
33	Page 20	Please include a chart or table with the amount of material to be moved. Include the volume of topsoil, the volume of decorative stone, engineered material stockpile, and the waste used for backfill. As written the statement notes the deposit continues at depth but doesn't clearly define the operator's intent.	lah	

R647-4-108 - Hole Plugging Requirements

Comment #	Sheet/Page/Map/Table #	Comments	Initials	Review Action
34		Please include costs for plugging the well in the reclamation cost estimate. A determination will be made at the time of reclamation whether the well needs to be plugged and abandoned.	lah & pbb	

R647-4-109 - Impact Assessment

109.1 - Impacts to surface & groundwater systems

Comment #	Sheet/Page/Map/Table #	Comments	Initials	Review Action
35		Groundwater was reportedly encountered at 30 feet below ground surface in the one well on the property. The elevation of where water was encountered was not reported so there could be no determination as to whether or not groundwater would be encountered by mining. Impacts to groundwater were not analyzed in this section as required by rule.	aa	
36	Appx. F	A review of the stormwater plan indicates that captured stormwater is collected in mine pits and discharged through infiltration. This requires a groundwater discharge permit since the pits become percolation/infiltration basins. Please show proof of a Ground Water Discharge Permit filed with the Division of Water Quality or correspondence from Water Quality showing a permit is not needed.	mpb	
37	Figure 4a	The proposed "Access Road" shown on this figure will impact a jurisdictional wetland and require a Section 404 Joint Permit filed with the Army Corps of Engineers and Utah State Engineers Office if fill will be used to construct the crossing. This can be avoided if the crossing can be spanned with a bridge that requires no fill. Please describe the proposed method to be used for the crossing.	mpb	
38	Section 109.1	Potential impacts to wetlands and natural drainage channels in and around the permit area were not analyzed in this section either. If potential impacts exist, a mitigation plan must be proposed. Information was presented in Section 107.2 & 3 regarding erosion control measures, but the mitigation information needs to be addressed under impacts. The operator states that they will follow the recommendations from the consultant and the Corps of Engineers, but those recommendations were not listed in the plan.	aa	
39	Pg. 22	Please change the wording in the initial sentence in this section to state that no wetlands will be disturbed unless "permitted" by the Corps of Engineers, not "mitigated."	mpb	
40		The northeast corner of the permit area shows a disturbance area that has affected the natural drainage channel that flows into Lost Creek. The proposed mine expansion area is on the west side of the current disturbance. Presumably, no additional mining will take place in this north east area. If this is correct, it should be reclaimed as soon as possible as required by rule R647-4-107.6 and in accordance with the standards in R647-4-111.2.	aa	

109.2 - Impacts to threatened & endangered wildlife/habitat

Comment #	Sheet/Page/Map/Table #	Comments	Initials	Review Action
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Comment #	Sheet/Page/Map/Table #	Comments	Initials	Review Action
41	Page 23	Please provide a discussion of the impacts this operation has had on wildlife resources and projected impacts for future operations. Provide a list of species (listed threatened or endangered species, sensitive species, and species of high interest). This can be obtained by consulting with the Utah Division of Wildlife Resources Northern Region Office in Ogden. Discuss the loss of habitat (total disturbed area) and how it will be mitigated. Include in this discussion impacts and potential impacts on the greater sage grouse. (The species may be affected even though this site is not within a political sage grouse management area.) There are active leks in close proximity to the quarry and it is likely the area of the quarry was used for brooding/rearing habitat as well as summer/winter range.	lk	

109.4 - Slope stability, erosion control, air quality, safety

Comment #	Sheet/Page/Map/Table #	Comments	Initials	Review Action
42	Page 23	MSHA regulates worker safety. Please restate first sentence to be correct.	lah	
43	Page 23	More text is needed regarding slope stability and public safety. The geotechnical report is included as Appendix I, but it is not mentioned in the text. Please refer to the report follow the recommendations of the report.	lah	

R647-4-110 - Reclamation Plan

110.2 - Roads, highwalls, slopes, drainages, pits, etc., reclaimed

Comment #	Sheet/Page/Map/Table #	Comments	Initials	Review Action
44	Page 24	Please add additional information on the reclamation of the dump areas. Specifically the slope angles of loose material, such as dumps and fill, must be graded to eliminate erosional hazards and to support the revegetation and the post mining land use. The geotechnical report discusses the slope angle of the fill slopes.	lah	
45	Page 24	Drainages: The proposed stream crossing for the access road to the Phase II area will need to be restored. Please add text describing the restoration efforts need for this.	mpb	
46	Page 24	Figure 6a and 6b are not consistent with the geotechnical report nor the text on pages 25 and 27. Please update and be consistent. The Division cannot complete a thorough review until the plan is consistent regarding slope stability. This part of the plan affects the bonding costs.	lah	
47	Page 24	The NOI says no mining will be conducted in the drainages, but the drainages contain mining-related disturbances. A plan is required for reclaiming the disturbances in the drainages. This would include the culverts and crossing. Generally all fill and culverts are removed and the stream channel grade is restored. Please modify the plan to reflect the reclamation of the drainages.	lah	

110.5 - Revegetation planting program

Comment #	Sheet/Page/Map/Table #	Comments	Initials	Review Action
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Comment #	Sheet/Page/Map/Table #	Comments	Initials	Review Action
48	Page 26	The use of the seed mix provided is not likely to provide a permanent, diverse vegetation community to sustain the postmining land uses. Please consider the attached seed mix as an alternative, which will also better provide for the habitat needs of the Greater Sage Grouse.	lk	

R647-4-112 – Variance

Comment #	Sheet/Page/Map/Table #	Comments	Initials	Review Action
49		No variances requested – no further action is needed	lah	

R647-4-113 – Surety

Comment #	Sheet/Page/Map/Table #	Comments	Initials	Review Action
50	Tank Removal	Please include costs for disposal of tanks	whw	
51		Building demolition: Please include costs for a building pre-demolition inspection for hazardous building materials and components as required by the Division of Air Quality. Please include potential contingency costs for removal and disposal of these materials if found.	mpb	
52	110.2 Highwalls	Please state how highwalls will be brought into compliance and include the costs in the reclamation cost estimate. The reclamation plan says highwalls will be worked to maintain up to a 45-degree slope and stair-stepped, or the recommendations in the geotechnical report will be applied. There is nothing in the reclamation cost estimate that directly relates to highwalls. For example, will the highwalls have to be shot to lessen the slope or can it be done with equipment?	whw	
53	Scarify	The Means number listed is 32 91 13 2620, and it should be 32 91 13.23 2620.	wwh	
54	Earthwork Spread Stockpile	The unit cost for spreading the soil stockpile is in 31 23 23 14 5000, and this is for a 300 horsepower bulldozer to push sand and gravel 50 feet. This assumes that stockpiles are an average of 50 feet from the area where the material will be deposited. Please show where the soil stockpiles are located, or increase the haul distance. If the haul distances are long then the material could be transported using trucks or excavators.	whw	

Attachment: Recommended Seedmix

Recommended Revegetation Species List
for

Mountain Valley Stone, Inc.
Brown's Canyon Quarry

M/043/0019

<u>Common Name</u>	<u>Species Name</u>	<u>Rate lbs/ac (PLS)</u>
Thickspike wheatgrass	<i>Agropyron dasystachum</i>	1.0
Bluebunch wheatgrass	<i>Agropyron spicatum</i>	2.0
Intermediate wheatgrass	<i>Agropyron intermedium</i>	1.0
'Canby bluegrass	<i>Poa Secunda</i>	0.1
Basin Wildrye	<i>Elymus cinereus</i>	2.0
Ladac Alfalfa	<i>Medicago sativa</i>	0.5
Yellow sweetclover	<i>Melilotus officinalis</i>	0.5
Western yarrow	<i>Achillea millefolium</i>	0.1
Lewis flax	<i>Linum lewisii</i>	1.0
Rocky mountain penstemon	<i>Penstemon strictus</i>	0.5
Small burnet	<i>Sanguisorba minor</i>	1.5
Mountain big sagebrush	<i>Artemisia tridentata vaseyana</i>	0.1
Serviceberry	<i>Amelanchier alnifolia</i>	1.0
Forage kochia	<i>Kochia prostrata</i>	0.5
Bitterbrush	<i>Purshia tridentata</i>	1.0
Total		12.8 lbs/ac

Note: Western Yarrow, sagebrush and forage kochia need to be broadcast on the surface of the seedbed.